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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/676,827 | 10/02/2003 | Kenneth Hicks | 58523-010100UT/US | 3055 |
| 7590 03/10/2005 Greenberg Traurig, LLP 1750 Tysons Boulevard, 12th Floor McLean, VA 22102 | | | EXAMINER GARTENBERG, EHUD | |
| | | | ART UNIT 3746 | PAPER NUMBER |

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,827

Applicant(s)

HICKS, KENNETH

Examiner

Ehud Gartenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 10-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9 is/are rejected.
- 7) ☐ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 8 and 10-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/22/2005. Claims 1-7 and 9 are examined.

Drawings

1. The drawings are objected to because it is believed that in Fig. 4, the proper description of element 420 should be -- adjustable exhaust (or outlet) cone --. Also, it is believed that the description of element 420 is missing from the written description. Applicant is required to thoroughly check the description to ensure that all labeled element are taught in the description. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

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the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Oklejas 3,899,875, that teaches the invention as claimed: a (Tesla) boundary-layer turbine comprising an housing and an inlet port (shown but unnumbered), an outlet port 43, a shaft 12, a plurality of discs 15, internal dovetail connections for the discs 44, and unnumbered channel in-between the discs. Note that the discs are in physical contact with each other at the hub, on the housing, and also see in-between contact spacers (unnumbered) having a central channel. Note that absolute contact between the discs would render them non-operational, by mutually denying wetted area to each other. In Tesla turbines, some spacing between the discs is inherently necessary in order to provide operability. Claim 3 was given little patentable weight, because in apparatus

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claims, the method of making is non-limiting in so far as the prior art anticipates a claimed invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oklejas as applied to claim 1 above, and further in view of De Feo 3224194, Balje 4449889, and Bosen 2004/0216466 taken together. Oklejas teaches the invention as claimed, however without the exhaust cone and its controllable shape. Balje, Bosen, and De Foe teach that the controlled-shaped cones at both inlets and outlets of fluid-dynamic machines were conventionally used in the art in order to streamline the flow, prevent flow separation, and therefore increase the efficiency of the apparatus. Therefore it would have been obvious to one of ordinary skill in the art to use e.g., Offeo's exhaust cone in Okleja's apparatus in order to prevent separation of the exhaust flow and therefore improve the efficiency of the Okleja turbine. To the extent that the present disclosure enables the controllable shape of the cone, Okleja's cone is identically controllable at manufacturing.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oklejas as applied to claim 1 above, and further in view of Conrad 6568900. Oklejas teaches the

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invention as claimed, however without the coated ceramic material. Conrad teaches to add a catalytic coating to the discs (col. 10, ll. 15-24). Therefore it would have been obvious to one of ordinary skill in the art to add Conrad's ceramic coatings to Oklejas's apparatus in order to enhance the reaction of the constituents of the fluid stream (col. 10, ll. 15-24). The examiner takes Official Notice that at the time of the claimed invention, catalytic coatings were routinely applied to ceramic surfaces on high-temperature reaction zones.

Allowable Subject Matter

7. Claim 7 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

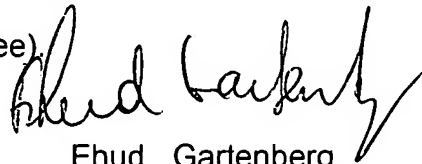
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Palumbo 6503067.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 571 272 4828. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571 272 4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ehud Gartenberg
Primary Examiner
Art Unit 3746

03072005